

Table A.6.1. Results of internal validation of vegetation map accuracy for revised vegetation map (v1.1). Error rates are generated by resubstitution, and indicate the models ability to predict the training set.

Group	Association Name (Common)	CEGL00	Groupnum	# plots	# spectra	spectra incorrect	error	accuracy
F1	Central Appalachian Pine - Oak / Heath Woodland	4996	1	8	32	5	0.156	84%
F2	Chestnut Oak - Black Birch Wooded Talus Slope	6565	2	7	28	6	0.214	79%
F3	Central Appalachian / Northern Piedmont Low-Elevation Chestnut Oak Forest	6299	3	22	88	20	0.227	77%
F4	Mixed Oak / Heath Forest (Piedmont / Central Appalachian Low-Elevation Type)	8521	4	10	40	1	0.025	98%
F5	Central Appalachian Dry-Mesic Chestnut Oak - Northern Red Oak Forest	6057	5	31	124	49	0.395	60%
F6	Mid-Atlantic Mesic Mixed Hardwood Forest	6075	6	1	4	0	0.000	100%
F7	Central Appalachian Northern Hardwood Forest (Yellow Birch - Northern Red Oak Type)	8502	7	8	32	13	0.406	60%
F8	Hemlock - Northern Hardwood Forest	6109	8	7	28	6	0.214	79%
F9	Northern Red Oak Forest (Pennsylvania Sedge - Wavy Hairgrass Type)	8506	9	25	100	17	0.170	83%
F10	Southern Appalachian Cove Forest (Typic Montane Type)	7710	10	17	66	5	0.076	92%
F11	Northern Blue Ridge Montane Alluvial Forest	6255	11	13	52	3	0.058	94%

Group	Association Name (Common)	CEGL00	Groupnum	# plots	# spectra	spectra incorrect	error	accuracy
F12	Central Appalachian Acidic Cove Forest (White Pine - Mixed Hardwoods Type)	6304	12	7	28	0	0.000	100%
F13	Successional Tuliptree Forest (Circumneutral Type)	7220	13	4	16	0	0.000	100%
F14	Central Appalachian Basic Boulderfield Forest (Montane Basswood - White Ash Type)	8528	14	14	56	8	0.143	86%
F15	Central Appalachian Rich Cove Forest	6237	15	5	16	0	0.000	100%
F16	Central Appalachian Montane Oak - Hickory Forest (Basic Type)	8518	16	18	72	1	0.014	99%
F17	Central Appalachian Montane Oak - Hickory Forest (Acidic Type)	8516	17	11	48	6	0.125	88%
F18	Central Appalachian Acidic Oak - Hickory Forest	8515	18	5	20	1	0.050	95%
F19	Central Appalachian Basic Oak - Hickory Forest (Submontane / Foothills Type)	8514	19	7	32	4	0.125	88%
F20	Northern Hardpan Basic Oak - Hickory Forest	6216	20	2	12	0	0.000	100%
F21	Black Locust Successional Forest	7279	21	6	24	2	0.083	92%
O1	High-Elevation Greenstone Barren	8536	31	9	36	1	0.028	97%
O2	High-Elevation Acidic Heath Barren / Pavement	8538	32	3	12	1	0.083	92%
O3	High-Elevation Outcrop Barren (Black Chokeberry Igneous / Metamorphic Type)	8508	33	3	12	0	0.000	100%

Group	Association Name (Common)	CEGL00	Groupnum	# plots	# spectra	spectra incorrect	error	accuracy
O4	Central Appalachian High-Elevation Boulderfield Forest	8504	34	4	16	0	0.000	100%
O5	Central Appalachian Basic Woodland	3683	35	13	56	1	0.018	98%
O6	Central Appalachian Circumneutral Barren	6037	36	6	32	0	0.000	100%
O7	Central Appalachian Mafic Barren (Ninebark / Pennsylvania Sedge Type)	8529	37	7	27	1	0.037	96%
W1	Northern Blue Ridge Mafic Fen	6249	41	4	14	0	0.000	100%
W2	Central Appalachian Acidic Seepage Swamp	7853	42	3	12	0	0.000	100%
W3	Central Appalachian Woodland Seep	6258	43	2	8	0	0.000	100%
W4	Central Appalachian Basic Seepage Swamp	8416	44	8	32	0	0.000	100%
W5	High-Elevation Hemlock - Yellow Birch Seepage Swamp	8533	45	8	30	0	0.000	100%
W6	Shenandoah Valley Sinkhole Pond (Typic Type)	7858	46	0	8	0	0.000	100%
Total					1213	151		88%

Table A.6.2. Results of 2004 field validation of vegetation map accuracy for revised vegetation map (v1.1). Number of field plots reflects the original number of plots sampled for vegetation classification (i.e. training samples), while number of validation plots (“# Val plots”) represents field collected accuracy assessment plots. “CEGL00” represents the primary vegetation type recorded in the field during accuracy assessment (presumably the most likely type).

Group	Association Name (Common)	CEGL00	# Field plots	# Val plots	# Wrong	Error	Accuracy
F1	Central Appalachian Pine - Oak / Heath Woodland	4996	8	19	6	0.316	68%
F2	Chestnut Oak - Black Birch Wooded Talus Slope	6565	7	2	2	1.000	0%
F3	Central Appalachian / Northern Piedmont Low-Elevation Chestnut Oak Forest	6299	22	36	6	0.167	83%
F4	Mixed Oak / Heath Forest (Piedmont / Central Appalachian Low-Elevation Type)	8521	10	4	2	0.500	50%
F5	Central Appalachian Dry-Mesic Chestnut Oak - Northern Red Oak Forest	6057	31	40	12	0.300	70%
F6	Mid-Atlantic Mesic Mixed Hardwood Forest	6075	1				
F7	Central Appalachian Northern Hardwood Forest (Yellow Birch - Northern Red Oak Type)	8502	8	5	3	0.600	40%
F8	Hemlock - Northern Hardwood Forest	6109	7	1	0	0.000	100%
F9	Northern Red Oak Forest (Pennsylvania Sedge - Wavy Hairgrass Type)	8506	25	6	0	0.000	100%
F10	Southern Appalachian Cove Forest (Typic Montane Type)	7710	17	9	1	0.111	89%
F11	Northern Blue Ridge Montane Alluvial Forest	6255	13	3	0	0.000	100%

Group	Association Name (Common)	CEGL00	# Field plots	# Val plots	# Wrong	Error	Accuracy
F12	Central Appalachian Acidic Cove Forest (White Pine - Mixed Hardwoods Type)	6304	7	7	6	0.857	14%
F13	Successional Tuliptree Forest (Circumneutral Type)	7220	4	22	15	0.681	32%
F14	Central Appalachian Basic Boulderfield Forest (Montane Basswood - White Ash Type)	8528	14	5	2	0.400	60%
F15	Central Appalachian Rich Cove Forest	6237	5	6	3	0.500	50%
F16	Central Appalachian Montane Oak - Hickory Forest (Basic Type)	8518	18	11	2	0.182	82%
F17	Central Appalachian Montane Oak - Hickory Forest (Acidic Type)	8516	11	5	2	0.400	60%
F18	Central Appalachian Acidic Oak - Hickory Forest	8515	5	4	0	0.000	100%
F19	Central Appalachian Basic Oak - Hickory Forest (Submontane / Foothills Type)	8514	7	11	5	0.455	55%
F20	Northern Hardpan Basic Oak - Hickory Forest	6216	2				
F21	Black Locust Successional Forest	7279	6	27	12	0.444	56%
O1	High-Elevation Greenstone Barren	8536	9				
O2	High-Elevation Acidic Heath Barren / Pavement	8538	3				
O3	High-Elevation Outcrop Barren (Black Chokeberry Igneous / Metamorphic Type)	8508	3				

Group	Association Name (Common)	CEGL00	# Field plots	# Val plots	# Wrong	Error	Accuracy
O4	Central Appalachian High-Elevation Boulderfield Forest	8504	4				
O5	Central Appalachian Basic Woodland	3683	13				
O6	Central Appalachian Circumneutral Barren	6037	6				
O7	Central Appalachian Mafic Barren (Ninebark / Pennsylvania Sedge Type)	8529	7				
W1	Northern Blue Ridge Mafic Fen	6249	4				
W2	Central Appalachian Acidic Seepage Swamp	7853	3				
W3	Central Appalachian Woodland Seep	6258	2				
W4	Central Appalachian Basic Seepage Swamp	8416	8	1	1	1.000	0%
W5	High-Elevation Hemlock - Yellow Birch Seepage Swamp	8533	8				
W6	Shenandoah Valley Sinkhole Pond (Typic Type)	7858	0				
Total				224	80		64%

Table A.6.3. Results of 2005 field validation of vegetation map accuracy for revised vegetation map (v1.1). Number of field plots reflects the original number of plots sampled for vegetation classification (i.e. training samples), while number of validation plots (“# Val plots”) represents field collected accuracy assessment plots. “CEGL00” represents the vegetation type recorded in the field during accuracy assessment (presumably the most likely type).

Group	Association Name (Common)	CEGL00	# Field plots	# Val plots	# Wrong	Error	Accuracy
F1	Central Appalachian Pine - Oak / Heath Woodland	4996	8	2	2	1.000	0%
F2	Chestnut Oak - Black Birch Wooded Talus Slope	6565	7	4	3	0.750	25%
F3	Central Appalachian / Northern Piedmont Low-Elevation Chestnut Oak Forest	6299	22	9	2	0.222	78%
F4	Mixed Oak / Heath Forest (Piedmont / Central Appalachian Low-Elevation Type)	8521	10	5	3	0.600	40%
F5	Central Appalachian Dry-Mesic Chestnut Oak - Northern Red Oak Forest	6057	31	10	7	0.700	30%
F6	Mid-Atlantic Mesic Mixed Hardwood Forest	6075	1				
F7	Central Appalachian Northern Hardwood Forest (Yellow Birch - Northern Red Oak Type)	8502	8				
F8	Hemlock - Northern Hardwood Forest	6109	7	1	1	1.000	0%
F9	Northern Red Oak Forest (Pennsylvania Sedge - Wavy Hairgrass Type)	8506	25	1	1	1.000	0%
F10	Southern Appalachian Cove Forest (Typic Montane Type)	7710	17	7	1	0.143	86%
F11	Northern Blue Ridge Montane Alluvial Forest	6255	13	3	0	0.000	100%

Group	Association Name (Common)	CEGL00	# Field plots	# Val plots	# Wrong	Error	Accuracy
F12	Central Appalachian Acidic Cove Forest (White Pine - Mixed Hardwoods Type)	6304	7	3	2	0.667	33%
F13	Successional Tuliptree Forest (Circumneutral Type)	7220	4	5	2	0.400	60%
F14	Central Appalachian Basic Boulderfield Forest (Montane Basswood - White Ash Type)	8528	14	8	2	0.250	75%
F15	Central Appalachian Rich Cove Forest	6237	5	3	3	1.000	0%
F16	Central Appalachian Montane Oak - Hickory Forest (Basic Type)	8518	18	2	0	0.000	100%
F17	Central Appalachian Montane Oak - Hickory Forest (Acidic Type)	8516	11				
F18	Central Appalachian Acidic Oak - Hickory Forest	8515	5				
F19	Central Appalachian Basic Oak - Hickory Forest (Submontane / Foothills Type)	8514	7	5	4	0.800	20%
F20	Northern Hardpan Basic Oak - Hickory Forest	6216	2				
F21	Black Locust Successional Forest	7279	6				
O1	High-Elevation Greenstone Barren	8536	9				
O2	High-Elevation Acidic Heath Barren / Pavement	8538	3				
O3	High-Elevation Outcrop Barren (Black Chokeberry Igneous / Metamorphic Type)	8508	3				

Group	Association Name (Common)	CEGL00	# Field plots	# Val plots	# Wrong	Error	Accuracy
O4	Central Appalachian High-Elevation Boulderfield Forest	8504	4				
O5	Central Appalachian Basic Woodland	3683	13				
O6	Central Appalachian Circumneutral Barren	6037	6				
O7	Central Appalachian Mafic Barren (Ninebark / Pennsylvania Sedge Type)	8529	7				
W1	Northern Blue Ridge Mafic Fen	6249	4				
W2	Central Appalachian Acidic Seepage Swamp	7853	3				
W3	Central Appalachian Woodland Seep	6258	2				
W4	Central Appalachian Basic Seepage Swamp	8416	8				
W5	High-Elevation Hemlock - Yellow Birch Seepage Swamp	8533	8				
W6	Shenandoah Valley Sinkhole Pond (Typic Type)	7858	0				
Total				68	33		51%

Table A.6.4. Results of “paper” accuracy assessment using Long-Term Ecological Monitoring (LTEMs) and Plant Protection plot data for revised vegetation map (v1.1). Number of field plots reflects the original number of plots sampled for vegetation classification (i.e. training samples), while number of validation plots (“# Val plots”) represents number of plots assessed for accuracy. “GroupNum” represents the vegetation type recorded during accuracy assessment review (presumably the most likely type).

Group	Association Name (Common)	GroupNum	# Field plots	# Val plots	# Wrong	Error	Accuracy
F1	Central Appalachian Pine - Oak / Heath Woodland	F01	8	2	1	0.500	50%
F2	Chestnut Oak - Black Birch Wooded Talus Slope	F02	7	1	0	0.000	100%
F3	Central Appalachian / Northern Piedmont Low-Elevation Chestnut Oak Forest	F03	22	7	3	0.430	57%
F4	Mixed Oak / Heath Forest (Piedmont / Central Appalachian Low-Elevation Type)	F04	10	3	1	0.333	67%
F5	Central Appalachian Dry-Mesic Chestnut Oak - Northern Red Oak Forest	F05	31	24	5	0.208	79%
F6	Mid-Atlantic Mesic Mixed Hardwood Forest	F06	1	1	1	1.000	0%
F7	Central Appalachian Northern Hardwood Forest (Yellow Birch - Northern Red Oak Type)		8				
F8	Hemlock - Northern Hardwood Forest	F08	7	3	0	0.000	100%
F9	Northern Red Oak Forest (Pennsylvania Sedge - Wavy Hairgrass Type)	F09	25	5	2	0.400	60%
F10	Southern Appalachian Cove Forest (Typic Montane Type)	F10	17	25	2	0.080	92%
F11	Northern Blue Ridge Montane Alluvial Forest		13				

Group	Association Name (Common)	GroupNum	# Field plots	# Val plots	# Wrong	Error	Accuracy
F12	Central Appalachian Acidic Cove Forest (White Pine - Mixed Hardwoods Type)	F12	7	1	1	1.000	0%
F13	Successional Tuliptree Forest (Circumneutral Type)	F13	4	19	13	0.684	32%
F14	Central Appalachian Basic Boulderfield Forest (Montane Basswood - White Ash Type)	F14	14	2	0	0.000	100%
F15	Central Appalachian Rich Cove Forest	F15	5	13	7	0.538	46%
F16	Central Appalachian Montane Oak - Hickory Forest (Basic Type)	F16	18	31	16	0.516	48%
F17	Central Appalachian Montane Oak - Hickory Forest (Acidic Type)		11				
F18	Central Appalachian Acidic Oak - Hickory Forest	F18	5	3	3	1.000	0%
F19	Central Appalachian Basic Oak - Hickory Forest (Submontane / Foothills Type)	F19	7	30	25	0.833	17%
F20	Northern Hardpan Basic Oak - Hickory Forest		2				
F21	Black Locust Successional Forest		6	18	10	.556	44%
O1	High-Elevation Greenstone Barren		9				
O2	High-Elevation Acidic Heath Barren / Pavement		3				
O3	High-Elevation Outcrop Barren (Black Chokeberry Igneous / Metamorphic Type)		3				

Group	Association Name (Common)	GroupNum	# Field plots	# Val plots	# Wrong	Error	Accuracy
O4	Central Appalachian High-Elevation Boulderfield Forest		4				
O5	Central Appalachian Basic Woodland		13				
O6	Central Appalachian Circumneutral Barren		6				
O7	Central Appalachian Mafic Barren (Ninebark / Pennsylvania Sedge Type)		7				
W1	Northern Blue Ridge Mafic Fen		4				
W2	Central Appalachian Acidic Seepage Swamp		3				
W3	Central Appalachian Woodland Seep		2				
W4	Central Appalachian Basic Seepage Swamp		8				
W5	High-Elevation Hemlock - Yellow Birch Seepage Swamp		8				
W6	Shenandoah Valley Sinkhole Pond (Typic Type)		0				
Total				191	98*		51%

* includes 3 plots placed in a newly defined class (F22 – Virginia Pine Successional Forest) from review of plot data